

Radio Frequency Exposure Evaluation

Standard Applicable

According to KDB 447498 Section: 4.3.1. Standalone SAR test exclusion considerations

a) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot [\sqrt{f(\text{GHz})}]$$

≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

SAR Exclusion Calculation Table

Frequency (MHz)	Max power (dBm)	Antenna Gain(dBi)	EIRP Power (dBm)	tune-up tolerance (dB)	Max power (mW)	Min Distance (mm)	Result	Limit (3.0 @ 1g SAR)
2402	0.62	2.50	3.12	1	2.582260	5.00	0.800	3.0
2442	0.84	2.50	3.34	1	2.716439	5.00	0.849	3.0
2480	0.98	2.50	3.48	1	2.805434	5.00	0.884	3.0

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